

# Teaching *NeuroImage*: Simple partial frontal status epilepticus with recurrent asymmetric tonic seizures



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A 44-year-old man with antecedents of mental retardation, diffuse right cerebral atrophy, and complex partial seizures with and without secondary generalization was admitted to our hospital for reevaluation of his antiepileptic medication. He was being treated with oxcarbazepine, lamotrigine, clobazam, and phenytoin. The dosage of oxcarbazepine was progressively diminished and treatment with valproic acid was begun. Video-electroencephalographic (v-EEG) monitoring was carried out after partial sleep deprivation. Interictal EEG showed frequent polyspikes and spike-wave discharges involving midline (Fz, Cz) and both prefrontal (Fp1, Fp2) and superior frontal (F3, F4) electrodes. These epileptiform discharges were accentuated over the right hemisphere. During a 90-minute period of monitoring, 20 stereotyped seizures were captured. He experienced sudden and brief recurrent seizures consisting of vocalizations, asymmetric tonic posturing, more prominent on the left, mild head deviation to the right, speech arrest, and increase in body tone (see video). Seizures lasted from 10 to 20 seconds. The patient was conscious and able to follow commands, but he remained anarthric during seizures. Immediately after each

seizure, he was oriented and able to explain what was happening. The ictal EEG showed a focal discharge of paroxysmal fast activity maximal at frontocentral areas and the vertex progressively constituting well-formed spike-wave discharges that were more accentuated on the left (figure). Postictal slowing on the EEG was absent. Seizures ceased after treatment with IV clonazepam.

Ictal semiology and EEG findings were characteristic of supplementary sensorimotor area (SSMA) seizures.<sup>1</sup> The patient remained conscious and postictal confusion was absent. This case represents simple partial frontal status epilepticus suggestive of involvement of the SSMA, though not necessarily arising from that area.<sup>2</sup> To our knowledge, this is a rare clinical condition and v-EEG documentation of a similar case has not been previously reported.

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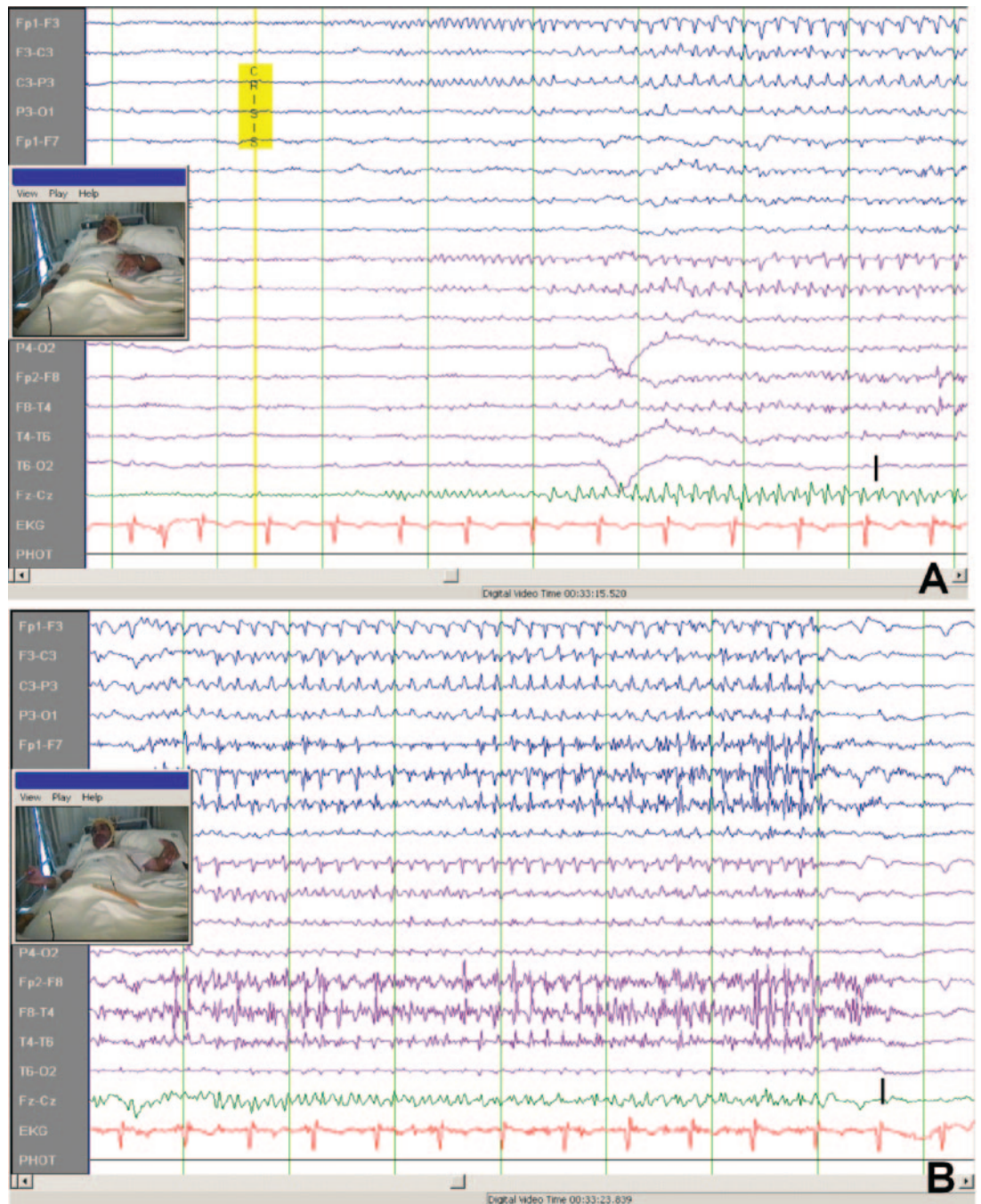
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**Figure** A typical seizure



(A) Onset of the seizure. (B) Progression of the seizure with asymmetric tonic posturing, more prominent on the left. The patient remained completely conscious. Low filter: 0.53 Hz; high filter: 70 Hz; notch filter: 50 Hz. Vertical bar: 100  $\mu$ V. Distance between solid vertical dark lines: 1 second (speed: 30 mm/second).

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